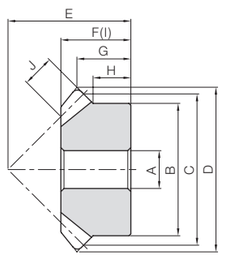
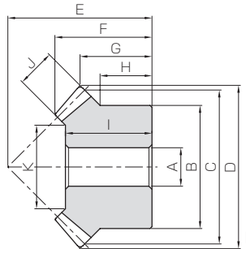
Specifications	
Precision grade	JIS B 1704: 1978 grade 3
Gear teeth	Gleason
Pressure angle	20°
Material	S45C
Heat treatment	—
Tooth hardness	(less than 194HB)
Surface treatment	Black oxide coating

* The precision grade of J Series products is equivalent to the value shown in the table.

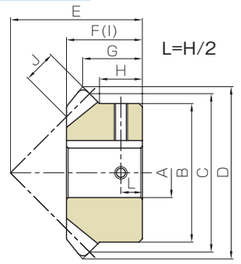


B2

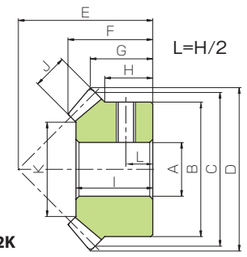


B3

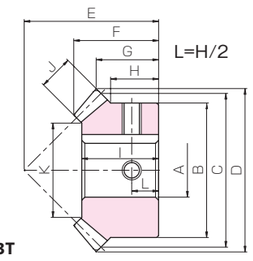
J Series



B2K



B3T



B3K

To order J Series products, please specify: Catalog No. + J + BORE.

To order Hardened Plus, please specify Catalog No. + H. Example: SM2-16H

Catalog Number	Gear Ratio	No. of teeth	Shape	Bore	Hub dia.	Pitch dia.	Outside dia.	Mounting distance	Total length	Crown to back	Hub width	Hole length	Face width	Holding surface dia.	Allowable torque: Bending strength		Allowable torque: Surface durability		Allowable torque: Surface durability (H)		Weight (kg)
				A_{H7}	B	C	D	E	F	G	H	I	J	K	N·m	kgf·m	N·m	kgf·m	N·m	kgf·m	
SM2-16 (H)	1	16	B2	10	27	32	34.83	30	19	15.41	11.5	19	7		3.84	0.39	0.33	0.034	1.42	0.15	0.076
SM2.5-16 (H)				12	34	40	43.53	35	21	16.77	12	21	9	—	7.63	0.78	0.68	0.069	2.86	0.29	0.14
SM3-16 (H)				14	42	48	52.24	40	23	18.12	13	23	11		13.3	1.36	1.21	0.12	5.06	0.52	0.22
SM1-20 (H)	1	20	B3	6	16	20	21.41	20	13.94	10.71	8	12	5	9.86	0.89	0.091	0.084	0.0086	0.37	0.038	0.019
SM1.25-20 (H)				8	22	25	26.77	23	15.27	11.38	9	13	6	13.03	1.70	0.17	0.16	0.017	0.71	0.072	0.036
SM1.5-20 (H)				8	26	30	32.12	30	21.24	16.06	13	19	8	15.37	3.12	0.32	0.30	0.031	1.31	0.13	0.074
SM2-20 (H)				12	34	40	42.83	37	24.89	18.41	14	22	10	21.72	7.13	0.73	0.72	0.073	3.05	0.31	0.15
SM2.5-20 (H)				14	42	50	53.54	48	32.54	24.77	19	29	12	28.06	13.6	1.39	1.41	0.14	5.90	0.60	0.30
SM3-20 (H)				16	50	60	64.24	58	39.84	30.12	23	35	15	31.57	24.1	2.45	2.54	0.26	10.5	1.08	0.53
SM3.5-20 (H)				20	60	70	74.95	65	44.13	32.47	25	40	18	39.09	38.8	3.96	4.15	0.42	17.2	1.75	0.82
SM4-20 (H)				20	64	80	85.65	75	50.78	37.83	27	45	20	43.43	57.0	5.82	6.19	0.63	25.4	2.59	1.15
SM5-20 (H)				25	80	100	107.07	90	60.38	43.54	30	54	26	54.46	114	11.6	12.6	1.29	51.3	5.23	2.15
SM6-20 (H)				28	100	120	128.48	104	67.67	48.24	34	60	30	67.15	191	19.4	21.8	2.22	87.5	8.92	3.68
SM8-20 (H)				30	130	160	171.31	125	73.33	50.66	30	62	35	95	413	42.1	49.6	5.06	194	19.8	7.05
SM1-25 (H)	1	25	B3	6	20	25	26.41	23	15.16	11.21	8	14	6	15.03	1.47	0.15	0.16	0.017	0.71	0.072	0.035
SM1.25-25 (H)				8	25	31.25	33.02	28	17.88	13.26	9.25	16	7	18.7	2.75	0.28	0.31	0.032	1.35	0.14	0.063
SM1.5-25 (H)				10	30	37.5	39.62	34	22.25	16.31	11.5	19	9	19.54	4.96	0.51	0.57	0.059	2.44	0.25	0.11
SM2-25 (H)				12	40	50	52.83	40	24.33	16.41	10	20	12	26.06	11.8	1.20	1.41	0.14	5.90	0.60	0.22
SM2.5-25 (H)				16	50	62.5	66.04	50	30.41	20.52	12.5	26	15	34.57	23.0	2.34	2.81	0.29	11.7	1.19	0.42
SM3-25 (H)				20	60	75	79.24	60	37.81	24.62	15	32	20	37.43	42.1	4.29	5.24	0.53	21.6	2.20	0.74
SM3.5-25 (H)				25	70	87.5	92.45	70	43.23	28.72	17.5	37	22	46.77	64.7	6.60	8.19	0.83	33.5	3.42	1.15
SM4-25 (H)				28	80	100	105.66	80	49.32	32.83	20	43	25	55.29	96.3	9.82	12.4	1.26	50.2	5.12	1.73
SM5-25 (H)				28	100	125	132.07	100	60.82	41.04	25	50	30	65.15	184	18.7	24.2	2.47	96.8	9.87	3.41
SM6-25 (H)				28	120	150	158.48	120	72.32	49.24	30	61	35	83	309	31.5	42.1	4.29	166	16.9	6.03
SM1-30 (H)	1	30	B3	8	24	30	31.41	28	17.71	13.71	10	16	6	19.03	1.99	0.20	0.26	0.026	1.11	0.11	0.057
SM1.25-30 (H)				10	30	37.5	39.27	36	23.47	18.13	13.5	21	8	22.37	4.05	0.41	0.54	0.055	2.28	0.23	0.12
SM1.5-30 (H)				10	36	45	47.12	43	28.24	21.56	16	25	10	25.71	7.19	0.73	0.97	0.099	4.08	0.42	0.21
SM2-30 (H)				12	45	60	62.83	50	29.42	21.41	12.5	25	12	36.06	15.9	1.62	2.22	0.23	9.20	0.94	0.37
SM2.5-30 (H)				16	60	75	78.54	62	36.28	26.27	17	32	15	47.57	31.1	3.17	4.43	0.45	18.2	1.86	0.76
SM3-30 (H)				20	70	90	94.24	75	45.47	32.12	20	40	20	53.43	57.5	5.87	8.33	0.85	34.0	3.46	1.32
SM3.5-30 (H)				25	90	105	109.95	85	49.66	34.97	25	45	22	67.77	88.0	8.97	13.0	1.32	52.3	5.34	2.20
SM4-30 (H)				28	100	120	125.66	95	54.52	37.83	25	50	25	79.29	131	13.3	19.6	2.00	78.3	7.99	3.09
SM5-30 (H)				28	130	150	157.07	120	68.56	48.54	35	62	30	99.15	249	25.4	38.3	3.91	150	15.3	6.47

[Caution on Secondary Operations] ① See Page 22 for more details on Hardened Plus (H Series and HJ Series).

* The product shapes of J Series items are identified by background color.

Bore H7	6	8	10	12	14	15	16	17	18	19	20	22	25	28	30	32	35	40	45	50	55	60	65	70	75	80	85
Keyway Js9																											
Screw size	—		4×1.8		5×2.3				6×2.8				8×3.3			10×3.3		12×3.3	14×3.8		16×4.3	18×4.4		20×4.9			22×5.4
Catalog Number	M4	M5	M4						M5				M6			M8			M10		M12			M16			
SM2-16 J BORE			■	■																							
SM2.5-16 J BORE				■	■	■	■	■																			
SM3-16 J BORE					■	■	■	■	■	■	■																
SM1-20 J BORE	■																										
SM1.25-20 J BORE		■																									
SM1.5-20 J BORE		■	■																								
SM2-20 J BORE			■	■	■	■	■																				
SM2.5-20 J BORE					■	■	■	■	■	■	■																
SM3-20 J BORE							■	■	■	■	■	■															
SM3.5-20 J BORE											■	■	■	■	■												
SM4-20 J BORE											■	■	■	■	■	■	■										
SM5-20 J BORE													■	■	■	■	■	■									
SM6-20 J BORE														■	■	■	■	■	■	■							
SM8-20 J BORE															■	■	■	■	■	■	■	■	■	■	■		
SM1-25 J BORE	■																										
SM1.25-25 J BORE		■	■	■																							
SM1.5-25 J BORE			■	■	■																						
SM2-25 J BORE				■	■	■	■	■	■	■																	
SM2.5-25 J BORE							■	■	■	■	■	■															
SM3-25 J BORE											■	■	■	■													
SM3.5-25 J BORE													■	■	■	■	■										
SM4-25 J BORE														■	■	■	■	■	■								
SM5-25 J BORE														■	■	■	■	■	■	■							
SM6-25 J BORE														■	■	■	■	■	■	■	■	■					
SM1-30 J BORE		■	■	■																							
SM1.25-30 J BORE			■	■	■	■	■																				
SM1.5-30 J BORE			■	■	■	■	■	■	■																		
SM2-30 J BORE				■	■	■	■	■	■	■	■	■															
SM2.5-30 J BORE							■	■	■	■	■	■	■	■	■	■											
SM3-30 J BORE											■	■	■	■	■	■	■										
SM3.5-30 J BORE													■	■	■	■	■	■	■	■							
SM4-30 J BORE														■	■	■	■	■	■	■	■	■					
SM5-30 J BORE														■	■	■	■	■	■	■	■	■	■	■	■	■	■

[Caution on J series] ① Cancellation is not possible for made-to-order products. See page 42 for lead times and allowable order quantities. See page 44 for other precautions.
② Hardened Plus is not available for products listed in the J Series lineup.

Product Precautions → Page 310
Precautions for Standard Machined Products → Pages 42~44